

Development of an instructional tutor training module for the Online Learning Academy

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Abstract: Students involved in distance learning are using a variety of methods to find help online with their courses. Seeking help online can be due to a number of different factors. It is assumed that tutors not only possess a certain competence level in the academic area for which they are tutoring, but that they also have training and development in the intricacies of online learning methodologies. The purpose of this instructional design project was to develop and evaluate a training module for new hires with the Online Learning Academy to promote the development and refinement of their abilities as highly-trained online tutors. The module was designed using a single website and provided instruction on two main content areas – OLA program policies and online tutoring practices. The module included pre- and post-module assessments, section surveys along with videos and other online multi-media resources. Post-test results showed that the study group improved an average of 22% from their pre-test scores. Therefore, these results show that the module was designed with the end-users in mind and that it did present content that was educational and relevant to the participants. Future research recommendations include tutor observations using criterion-referenced evaluations and adoption of a program-wide pedagogy for instructional support and tutee learning.

Introduction

Students involved in distance learning are using a variety of methods to find help online with their courses. Seeking help online can be due to a number of different factors - limited instructor availability, need for content reinforcement and/or questions regarding assignments. While some students use class discussion boards or online meetings to create virtual study groups, many students are turning to online tutoring programs for specific help with their classes.

It is assumed that tutors not only possess a certain competence level in the academic area for which they are tutoring, but that they also have training and development in the intricacies of online learning methodologies. Unfortunately, most tutors are using tutoring methods that are more appropriate in face-to-face tutoring environments or relying on what they perceive as valid online learning strategies.

The Online Learning Academy (OLA) hires undergraduate and graduate students (tutors) to tutor Hawaii public school students (tutees) in math and science. Some tutors have had experience tutoring students, while others have not. In most all of the cases, tutors have not had any experience with tutoring students online. Therefore, the purpose of this instructional design project was to develop and evaluate a training module for new hires with the OLA to promote the development and refinement of their abilities as highly-trained online tutors.

Background

Distance learning is defined as “a formal education process in which the student and instructor are not in the same place” (Parsad & Tice, 2008, p. 1). In a National Center for Education Statistics (NCES) 2006-07 survey, the authors defined this type of instruction as “synchronous or asynchronous, and it involved communication using video, audio, or computer technologies, or by correspondence” (Parsad & Tice, 2008, p. 1). Many students are now utilizing distance learning as a primary or alternative way in which to obtain credit for classes or obtain a degree.

Researchers claim that “benefits of tutoring are assumed to arise from one-to-one interaction between a knowledgeable, skilled individual (tutor) and less skilled individual (tutee)” (Johnson & Bratt, 2009, p. 32). Some research even shows that “students can learn more using computer technologies” (Mendicino, Razzaq & Heffernan, 2009, 332). In addition, peer tutoring helps improve classroom performance (Powell, 1997). Due to these benefits, the demand for online tutoring has increased over the years. Researchers suggest that tutors could help improve retention in online higher education schools if they supported students with studying strategies (Jelfs, Richardson & Price, 2009).

When students visit online tutoring programs, it is imperative that they have a positive learning experience. These experiences are created by properly training online tutors. Jelfs et al. investigated questionnaire responses from 457 students and 602 tutors on what defines ‘a good tutor’ (2009, p. 419). They found that student experiences and tutoring strategies varied greatly among institutions and there was not a universal definition of a ‘good tutor’. Due to these results, there is a need for an official training program for online tutors because although there isn’t a universal definition for a ‘good tutor,’ basic online tutoring skills are needed.

Methods

The purpose of this instructional design project was to develop and evaluate a training module for new hires with the OLA to promote the development and refinement of their abilities as highly-trained online tutors. The module was designed using a single website and provided instruction on two main content areas: OLA program policies and online tutoring practices. Each area was developed further with several sections. These included new hire procedures and new hire training under program policies plus conducting tutoring sessions, best practices for online tutoring and universal design for learning under tutoring practices. The website contained embedded pre- and post-module

assessments, embedded section surveys along with training videos and other resources (e.g. second-party instructional videos, readings, and other helpful, project-related websites).

Population

The target population was University of Hawai'i at Mānoa new hires with OLA. These students were undergraduate and graduate students, majoring in math- or science-related fields and in their sophomore, junior or senior years. They had strong content knowledge backgrounds in math and/or science having taken both introductory and advanced courses in these subjects as part of their majors. All tutors had basic experience with using online communication and collaboration tools. Some tutors had experience tutoring students; however, no tutors had previous experience with tutoring students using an online platform.

Instructional strategies

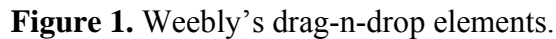
The framework for the training module was based upon the Dick and Carey method for instructional design (1990). The module was created online using a mixture of multi-media tools, such as text, images and videos. Actual instruction was based on Gagne's nine events of instruction – gain attention, inform learner of objectives, stimulate recall of prior learning, present stimulus material, provide learner guidance, elicit performance, provide feedback, assess performance, and enhance retention and transfer (Gagne, 1965).

An introduction was provided for participants that laid out the project's description, its goals, and instructions for navigating through the module. A "consent to participate" form was embedded at the beginning of the module for which participants were required to either "agree" or "not agree" to voluntarily participate in the research project. Participants' identity was kept private using a random number generator. For each assessment or survey, participants were instructed to use their personalized random number not personal information, such as name or any other identifying feature.

The module provided instruction on two main content areas: program policies and tutoring practices. The section on program policies included new hire procedures and new hires training. The section on tutoring practices included procedures for conducting tutoring sessions, best practices for online tutoring and principles of universal design for learning (UDL).

Technologies

The training module was created using Weebly – an online, widget-based website creator. The module comprised four main pages (Home, Project Background, Program Policies and Tutoring Practices) with sub-pages for each of the different sections. Types of multi-media (i.e., titles, text, images, readings, and videos) were easily inserted on the website using Weebly's drag-n-drop elements (See Figure 1). Images used in the project were from the OLA image database or Stock.xchng, an open source stock photo website. All



The participants of the research project were solicited via email. Within the email, a link to the instructional module was provided along with basic instructions on how to begin. Quantitative and qualitative data was collected using embedded pre- and post-module assessments and embedded section surveys. The assessments and surveys were created using the “survey” feature of Google documents. To ensure that participants’ identities were kept private, a random generator tool was used. For each assessment or survey, participants were instructed to use their personalized random number not personal information, such as name or any other identifying feature. Module assessments and section surveys consisted of a mixture of multiple-choice, open-ended and Likert scale questions. In addition, a demographic survey and attitudinal survey used open-ended and Likert scale questions as well.

Results

From those solicited, 11 agreed to anonymously participate in the research project. The study group comprised seven females and four males ranging in ages from 19 to 23 years of age. All of the participants were undergraduate students at the University of Hawai'i at Mānoa, so their highest level of education fell under the category "Some College" on the demographic survey.

The demographic survey consisted of 12 Likert scale questions and two open-ended questions. First, the demographic survey, given at the beginning of process, revealed that five out of the 11 participants (approximately 45%) felt "Comfortable" or "Very Comfortable" about using technology to support their tutoring. Second, seven out of the 11 participants (approximately 63%) were "Familiar" or "Very Familiar" with tutoring in an online environment. This was surprising because all of the participants for this research project have had experience tutoring in the OLA's online tutoring room for at least two months. Lastly, four of the 11 participants (approximately 36%) were likely to integrate into their tutoring the procedures, strategies or suggestions presented in the module. It was surprising to know that less than half of the participants would be incorporating procedures and strategies from the instructional module. To address this concern, this question should be included in the pre- and post-module assessment and not just in the demographic survey. Also, the types of technology used (i.e., virtual classroom, collaboration tools, etc.) in tutor support should be more clearly delineated in future module improvements.

The pre- and post-module assessments were termed "pre-test" and "post-test" for the participants. The pre-test consisted of 20 multiple-choice questions given at the beginning of the module to discern previous knowledge over two main content areas: OLA program policies and online tutoring practices. A post-test, with the same questions as the pre-test, was given at the end of the module to measure the effectiveness of the module at teaching participants module content. For each section, open-ended and Likert scale questions were used. For the pre-test, participants scored an average of 11.27 out of 20 questions (approximately 56%). Scoring improved with an average score of 15.54 out of 20 questions (approximately 78%). A graph of participant scores is shown in Figure 3. Participants appeared to have scored lower on the pre-test due to little or no previous knowledge regarding best practices for online tutoring and universal design for learning. Overall, the module was well received by participants. One participant said, *"This module really helped me understand how I can make my online tutoring better!"* while another participant said, *"I thought I knew everything I could about tutoring students online. I was wrong. Thanks!"*

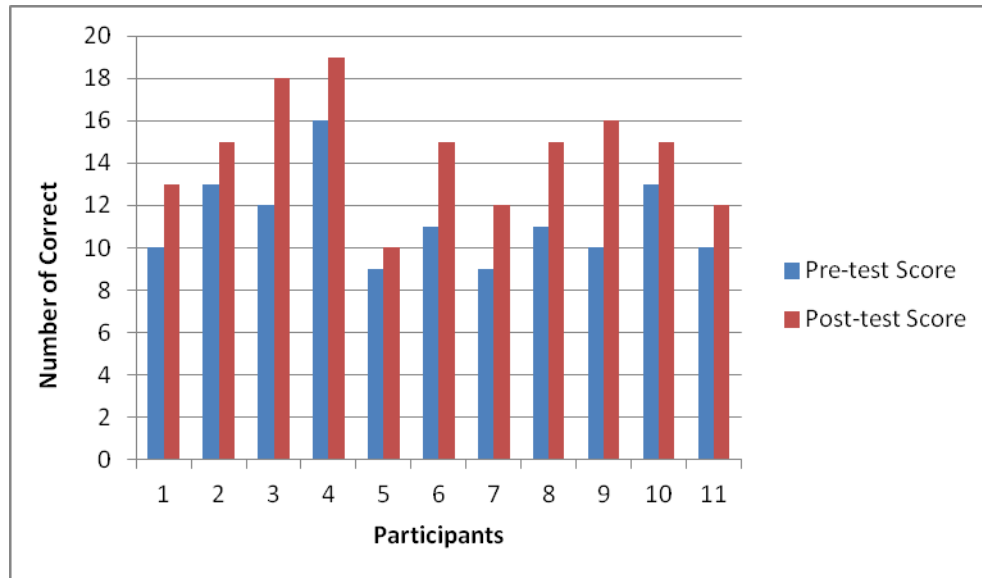


Figure 3. Participant pre- and post-test scores.

Discussion

Both quantitative and qualitative data (i.e., demographic survey, pre- and post-module assessments, section surveys, and attitudinal survey) were used in the evaluation of the effectiveness of the module at teaching participants module content. Participants' views and attitudes of the module are summarized in Table 1. The scale used was one to five. The highest averages were for level of difficulty and whether participants learned a lot from the instructional module. These results show that the module was designed with the end-users in mind and that it did present content that was educational and relevant to the participants. The lowest averages were for motivation to learn more about online teaching strategies and whether the questions were well-written and straightforward. Therefore, future module improvements need more emphasis on the critical success factors required for online tutoring in addition to modifying the instructions to be clearer for the participants.

Table 1. Summary of data from attitudinal survey.

Attitudinal Survey Question	Average
1. The module was clear and easy to understand.	3.7
2. The level of difficulty was about right for me.	4.4
3. The length of the module was manageable.	3.9
4. The videos and (added) examples in the module were helpful.	4.1
5. I learned a lot about tutoring online from the module.	4.4

6. The module will help me to integrate strategies for tutoring online.	4.3
7. The module motivates me to learn more about online teaching strategies.	3.5
8. The information in the module helped to prepare me for the surveys and assessments.	4.1
9. All of the questions were well-written and straightforward.	3.5

Note: Likert scale ranged from one to five.

Conclusion

Students are using a variety of online methods to find help with their courses. While some students use class discussion boards or virtual study groups others are turning to online tutoring programs for help. It is imperative that students using online tutoring programs have positive experiences. Student experiences are created by having highly trained tutors that are using online learning methodologies. The purpose of this instructional design project was to develop and evaluate a training module for new hires with the OLA to promote the development and refinement of their abilities as competently-trained online tutors.

Overall, the study recommends the following:

- a. More emphasis on the critical success factors required for online tutoring. This can be achieved by highlighting this information more within the module and specifically assessing participants on this topic.
- b. Tutor observations using criterion-referenced evaluations. This can be achieved by evaluating tutors on a regular basis and providing feedback and suggestions for improvement as part of each evaluation.
- c. Adoption of a program-wide pedagogy addressing instructional support and tutee learning. This can be achieved by creating a working group of OLA managers, coordinators and lead tutors that create a formal pedagogy for the Online Learning Academy.

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